

Appl. No. 10/723,994
Amdt. dated Dec. 11, 2006
Response to Office Action mailed August 10, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A golf club head having a forward striking face, the forward striking face comprising:

~~a forward striking face; and~~
~~a rearward surface, opposite the forward striking face;~~
a substantially planar recessed surface;

~~wherein the forward striking face is configured to include an engineered texture having a substantially planar recessed surface and a prescribed, regular pattern of a plurality of discrete, solid geometric shapes projecting forward from the recessed surface, wherein each of the geometric shapes has a volume of less than 0.0007 mm^3 , wherein the distance along the recessed surface between adjacent geometric shapes are spaced apart from each other along the recessed surface by is at least 0.1 mm, and each geometric shape is solid and has a volume of less than 0.0007 mm^3 and wherein the total volume of the geometric shapes contained within a square reference region on the forward striking face measuring 2.5 mm by 2.5 mm is less than 0.05 mm^3 .~~

Claim 2 (currently amended): The golf club head of claim 1, wherein the ~~pattern~~ total volume of geometric shapes has a ~~total volume of less than 0.02 mm^3 , measured over a~~ contained within the reference region ~~in the forward striking face having a size of 2.5 mm by 2.5 mm is less than 0.03 mm^3 .~~

Claim 3 (currently amended): The golf club head of claim 1, wherein the ~~pattern~~ total volume of geometric shapes has a ~~total volume, measured over a~~ contained within the reference region ~~in the forward striking face having a size of 2.5 mm by 2.5 mm, that is less than 25% of a volume over an equivalent portion of a golf club head having a striking face lacking such an engineered texture is less than 0.02 mm^3 .~~

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Claim 4 (currently amended): The golf club head of claim 1, wherein the pattern total volume of geometric shapes ~~has a total volume, measured over a~~ contained within the reference region in the forward striking face having a size of 2.5 mm by 2.5 mm, that is less than 15% of a volume over an equivalent portion of a golf club head having a striking face lacking such an engineered texture is less than 0.01 mm³.

Claim 5 (currently amended): The golf club head of claim 1, wherein each of the geometric shapes has a volume of less than ~~0.0003~~ 0.0005 mm³.

Claim 6 (currently amended): The golf club head of claim 1, wherein each of the geometric shapes ~~all have the same shape and size~~ has a volume of less than 0.0003 mm³.

Claim 7 (currently amended): The golf club head of claim 1, ~~and~~ further comprising a plurality of grooves formed in the forward striking face.

Claims 8-28 (canceled).

Claim 29 (currently amended): A wedge-type golf club head having a forward striking face defining a loft of at least 45 °, the forward striking face comprising:

a substantially planar recessed surface; and

a plurality of scorelines formed in the recessed surface; and

a regular pattern plurality of discrete, solid geometric shapes projecting from the recessed surface, the geometric shapes each ~~being solid and~~ having a volume of less than ~~0.0007~~ 0.0003 mm³;

wherein adjacent geometric shapes are separated from each other along the recessed surface by a distance of at least 0.1 mm, and wherein the total volume of the geometric shapes contained within a square reference region on the forward striking face measuring 2.5 mm by 2.5 mm is less than 0.02 mm³.

Claims 30-32 (canceled).

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Claim 33 (currently amended): The golf club head of claim ~~32~~ 29, wherein ~~the forward striking face has a plurality of scorelines formed therein, and wherein~~ the reference region is disposed between two adjacent scorelines.

Claims 34-35 (canceled).

Claim 36 (currently amended): The golf club head of claim ~~29~~ 1, wherein the geometric shapes are about identical in size and shape across the forward striking face.

Claim 37 (currently amended): The golf club head of claim ~~29~~ 1, wherein the geometric shapes are spaced substantially evenly across the forward striking face.

Claim 38 (currently amended): The golf club head of claim ~~29~~ 1, wherein the geometric shapes are formed as squares, diamonds, or circles.

Claim 39 (currently amended): The golf club head of claim ~~29~~ 1, wherein the geometric shapes include a first plurality of geometric shapes and a second plurality of geometric shapes.

Claims 40-42 (canceled).

Claim 43 (new): The golf club head of claim 1, each geometric shape having a depth measured from the recessed surface to a top portion of the geometric shape, wherein the depth is greater than or equal to 0.012 mm.

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A golf club head, comprising:

a forward striking face; and

a rearward surface, opposite the forward striking face;

wherein the forward striking face is configured to include an engineered texture having a substantially planar recessed surface and a prescribed, regular pattern of discrete, geometric shapes projecting forward from the recessed surface, wherein the geometric shapes are spaced apart from each other along the recessed surface by at least 0.1 mm and each geometric shape is solid and has a volume of less than 0.0007 mm^3 ;

~~and wherein the engineered texture enhances the performance of the golf club head upon striking a golf ball, providing one or more of an increased backspin, a lower launch angle, and a higher ball speed, as compared to a golf club head having a striking face lacking such an engineered texture.~~

Claim 2 (original): The golf club head of claim 1, wherein the pattern of geometric shapes has a total volume of less than 0.02 mm^3 , measured over a reference region in the forward striking face having a size of 2.5 mm by 2.5 mm.

Claim 3 (original): The golf club head of claim 1, wherein the pattern of geometric shapes has a total volume, measured over a reference region in the forward striking face having a size of 2.5 mm by 2.5 mm, that is less than 25% of a volume over an equivalent portion of a golf club head having a striking face lacking such an engineered texture.

Claim 4 (original): The golf club head of claim 1, wherein the pattern of geometric shapes has a total volume, measured over a reference region in the forward striking face having a size of 2.5 mm by 2.5 mm, that is less than 15% of a volume over an equivalent portion of a golf club head having a striking face lacking such an engineered texture.

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Claim 5 (original): The golf club head of claim 1, wherein each of the geometric shapes has a volume of less than 0.0003 mm^3 .

Claim 6 (original): The golf club head of claim 1, wherein the geometric shapes all have the same shape and size.

Claim 7 (original): The golf club head of claim 1, and further comprising a plurality of grooves formed in the forward striking face.

Claims 8-19 (canceled).

Claim 20 (previously presented): The golf club head of claim 1, wherein:

the forward striking face and the rearward surface form a front wall;

the golf club further include a body having a top portion, a toe portion, a heel portion, and a sole portion;

the top portion, toe portion, heel portion, and sole portion of the body define a front opening; and

the front wall is welded to the front opening of the body.

Claim 21 (previously presented): The golf club head of claim 20, wherein the front wall and at least the sole portion of the body are integrally formed with each other.

Claim 22 (previously presented): The golf club head of claim 1, wherein the golf club head is an iron-type head having a loft of at least 18° .

Claim 23 (previously presented): The golf club head of claim 1, wherein the golf club head is an iron-type head having a loft of at least 45° .

Claim 24 (previously presented): The golf club head of claim 20, wherein the body and the front wall together form a hollow head having a loft less than about 25° .

Claim 25 (previously presented): The golf club head of claim 1, wherein the engineered texture comprises a prescribed pattern of a first plurality of shapes and a second plurality of shapes, the first plurality of shapes being positioned adjacent to the second plurality of shapes.

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Claim 26 (canceled).

Claim 27 (previously presented): The golf club head of claim 6, wherein the geometric shapes have more than one orientation.

Claim 28 (previously presented): The golf club head of claim 1, wherein each geometric shape has an area on the forward striking face that is less than 0.05 mm^2 .

Claim 29 (currently amended): A wedge-type golf club head having a forward striking face, the forward striking face comprising:

a substantially planar recessed surface; and
a plurality regular pattern of discrete geometric shapes projecting from the recessed surface, the geometric shapes each being solid and having a volume of less than ~~0.007~~ 0.0007 mm^3 ;

wherein adjacent geometric shapes are separated from each other along the recessed surface by a distance of at least 0.1 mm.

Claim 30 (currently amended): The golf club head of claim 29, wherein the geometric shapes each have a volume of less than ~~0.005~~ 0.0005 mm^3 .

Claim 31 (currently amended): The golf club head of claim 30, wherein the geometric shapes each have a volume of less than ~~0.003~~ 0.0003 mm^3 .

Claim 32 (previously presented): The golf club head of claim 29, further comprising a reference region on the forward striking face, the reference region measuring 2.5 mm by 2.5 mm, wherein the discrete geometric shapes disposed within the reference region have a combined volume of less than 0.05 mm^3 .

Claim 33 (previously presented): The golf club head of claim 32, wherein the forward striking face has a plurality of scorelines formed therein, and wherein the reference region is disposed between two adjacent scorelines.

Claim 34 (previously presented): The golf club head of claim 33, wherein the discrete geometric shapes disposed within the reference region have a combined volume of less than 0.02 mm^3 .

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Claim 35 (currently amended): The golf club head of claim 29, further comprising:

a plurality of scorelines formed in the striking face; and

a reference region disposed between two adjacent scorelines, the reference region measuring 2.5 mm by 2.5 mm;

wherein the geometric shapes each have a volume of less than ~~0.003~~ 0.0003 mm³ and wherein the geometric shapes disposed within the reference region have a combined volume of less than 0.02 mm³.

Claim 36 (previously presented): The golf club head of claim 29, wherein the geometric shapes are about identical in size and shape.

Claim 37 (previously presented): The golf club head of claim 29, wherein the geometric shapes are spaced substantially evenly across the forward striking face.

Claim 38 (previously presented): The golf club head of claim 29, wherein the geometric shapes are formed as squares, diamonds, or circles.

Claim 39 (previously presented): The golf club head of claim 29, wherein the geometric shapes include a first plurality of geometric shapes and a second plurality of geometric shapes.